

WHAT IS CLAIMED IS:

1. A substrate processing apparatus comprising:

(a) at least one processing part each having a plurality of processing elements,
5 processing types of which are the same in each of said at least one processing part;

(b) a control element for controlling the operation of said plurality of processing elements, wherein the activation and halt of said processing elements are controlled independently; and

(c) a storage element for storing data related to operation conditions of said
10 processing elements,

said substrate processing apparatus being not only capable of executing a predetermined substrate processing with all of said plurality of processing elements but also capable of executing said predetermined substrate processing with only part of said plurality of processing elements.

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2. The substrate processing apparatus according to claim 1 wherein

said storage element stores information for specifying at least one first processing element among said plurality of processing elements, wherein said at least one first processing element is previously selected to be activated preferentially in said
20 substrate processing apparatus.

3. The substrate processing apparatus according to claim 2 wherein

said control element activates said at least one first processing element when no processing element has been activated for execution of said predetermined substrate
25 processing.

4. The substrate processing apparatus according to claim 3 further comprising:

5 (d) a selecting element for an operator to select an operation mode from a first mode and a second mode,

wherein said first mode is an operation mode in which only said at least one first processing element among said plurality of processing elements is activated at the execution of said predetermined substrate processing,

10 said second mode is an operation mode in which all processing elements are activated at the execution of said predetermined substrate processing, and

said control element activates one or more processing elements in accordance with the operation mode selected.

15 5. The substrate processing apparatus according to claim 4 wherein said control element halts one or more objective processing elements having been used for said predetermined substrate processing after a predetermined time has elapsed since operation of said one or more objective processing elements for said predetermined substrate processing had completed.

20 6. The substrate processing apparatus according to claim 5 wherein said one or more objective processing elements are processing element(s) other than said at least one first processing element.

25 7. The substrate processing apparatus according to claim 6 wherein said storage element further stores information specifying at least one second

processing element which is previously selected to be optionally activated, and

said at least one second processing element is operable to be additionally activated to be used for said predetermined substrate processing when only said at least one first processing element is initially used for said predetermined substrate processing.

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8. The substrate processing apparatus according to claim 7 wherein

said control element halts processing elements other than said at least one first processing element at the termination of said predetermined substrate processing.

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9. The substrate processing apparatus according to claim 7 wherein

said control element halts all of said processing elements in response to termination of said predetermined substrate processing, and

said at least one first processing element is activated again when a succeeding substrate processing is executed.

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10. A method of operating a substrate processing apparatus provided with at least one processing part, said at least one processing part each having a plurality of processing elements, processing types of which are the same in each of said at least one of processing part and activation and halt of which are independently controllable, said method comprising the steps of:

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(a) storing condition data related to respective operation conditions of said plurality of processing elements;

(b) determining whether or not all of said plurality of processing elements is required for a predetermined substrate processing requested; and

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(c) activating all of said plurality of processing elements or only part of said

plurality of processing elements in accordance with the determination result of the step (b) to execute said predetermined substrate processing with reference to said condition data.

5 11. The method according to claim 10 wherein
said step (a) comprises the step of
(a-1) selecting at least one first processing element which is to be activated preferentially, and
(a-2) storing information specifying said first processing element.

10 12. The method according to claim 11 wherein
said step (c) comprises the step of
(c-1) activating said at least one first processing element when no processing element has been activated for execution of said predetermined substrate processing.

15 13. The method according to claim 12 wherein
said step (b) comprises the step of
(d-1) determining an operation mode in response to selection by an operator from a first mode and a second mode,

20 wherein said first mode is an operation mode in which only said at least one first processing element among said plurality of processing elements is activated at the execution of said predetermined substrate processing,

said second mode is an operation mode in which all processing elements are activated at the execution of said predetermined substrate processing, and

25 said step (c-1) comprises the step of

activating one or more processing elements in accordance with the operation mode selected.

14. The method according to claim 13 further comprising the step of:

5 (d) halting said one or more objective processing elements having been used for said predetermined substrate processing after a predetermined time has elapsed since operation of said one or more objective processing elements for said predetermined substrate processing had completed.

10 15. The method according to claim 14 wherein

said one or more objective processing elements are processing element(s) other than said at least one first processing element.

16. The method according to claim 15 wherein

15 said step (a) further comprises the step of:

(a-3) storing information specifying at least one second processing element which is previously selected to be optionally activated, and

said step (b) further comprises the step of:

(b-2) additionally activating said at least one second processing element for
20 said predetermined substrate processing when only said at least one first processing element is initially used for said predetermined substrate processing.

17. The method according to claim 16 wherein

said step (d) includes the step of:

25 (d-1) halting processing elements other than said first processing element at the

termination of said predetermined substrate processing.

18. The method according to claim 16 wherein

said step (d) includes the steps of:

5 (d-2) halting all of said processing elements in response to termination of said predetermined substrate processing,

the method further comprising the step of:

(e) activating said at least one first processing element again when a succeeding substrate processing is executed.

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19. A program which is installable in a computer provided in a substrate processing apparatus, wherein execution of said program by said computer makes said substrate processing apparatus operate as a multi-mode substrate processing apparatus comprising:

15 (a) at least one processing part each having a plurality of processing elements, processing types of which are the same in each of said at least one processing part;

(b) a control element for controlling the operation of said plurality of processing elements, wherein activation and halt of said processing elements are controlled independently; and

20 (c) a storage element for storing data related to operation conditions of said processing elements,

wherein said multi-mode substrate processing apparatus is not only capable of executing a predetermined substrate processing with all of said plurality of processing elements but also capable of executing said predetermined substrate processing with only
25 part of said plurality of processing elements.